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THE BIRDS OF CUSTER AND DAWSON COUNTIES, MONTANA.

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Plates V-XII.

INTRODUCTION.

THE present list of birds known to occur in Custer and Dawson Counties, Montana, is the result of observation extending over a period of eighteen years and including almost every part of the area named. A few localities which I was personally unable to visit have been explored by my wife who is a keen observer of birds. I wish to take this opportunity of expressing my indebtedness to Mr. J. H. Price of Knowlton who has been familiar with eastern Montana since the eighties, and was at much trouble to send me information, skins, and notes, besides assisting my investigation in every possible way. Also to Mr. Dan Bowman for many interesting notes of especial value, as he was one of the pioneer settlers of Custer County. As far as I am aware, no list of birds of Dawson County, or any part of it, has hitherto appeared, but the late Captain Platte M. Thorne, U. S. A., published an excellent list, numbering 137 species, of the Birds of Fort Keogh, near Miles City (Custer County), in 'The Auk' for July, 1895, and upon this any subsequent list must necessarily be based.

Regarded geographically the area embraced by the two counties may be divided into river valleys, pine hills, rolling prairie and badlands, but from an ornithological standpoint, as will

presently appear, only two of these divisions deserve recognition, viz.: the pine hills and the prairie. The same physical conformation prevails throughout the country and may be described as a succession of high divides clothed with pines, which slope, more or less gradually, to large rivers.

Most of the intermediate country consists of rolling prairie, intersected by creeks fringed, as are the rivers, with cottonwoods, here and there relieved by a sprinkling of ash, box elder, and willow. In certain districts, however, irreclaimable badlands extend from the top of the divides downwards to the rivers, the most important tract in our area being that known as the Missouri Brakes on the river of the same name, to which I shall again refer. There are no mountains, properly so called, in either county, but Mountain Sheep Bluffs in Dawson County (the greater part of which is still unsurveyed), rise to 4,000 feet above sea level, and Glendive, the capital, has an elevation of 2,091 feet; while Maxwell Butte, on Mispah Creek, in Custer County, is 3,261 feet above sea level, and Miles City, the capital, 2,334 feet. Nor are there any lakes, properly so called, but the abundant rains of certain years form prairie ponds, often several acres in extent, which afford grateful resting-places to passing wild-fowl. Forks Lake, containing about 160 acres, on a fork of the Redwater River (north Dawson County) never becomes entirely dry. The total area of Custer County is 9,368,000 acres, or 14,637 square miles, and that of Dawson County is 13,280 square miles.

Owing to the fact that badlands are generally adjacent to pine hills, and often themselves conceal in their ravines and gulches a thick growth of pines and cedars, the avifauna of the two districts overlaps and is in most respects identical. The same remark applies to the prairie and river-valley regions, for the species frequenting the river bottom ascend the tributary creeks to the plains, and wherever the latter rise into pine hills which enclose wide parks, as in the neighborhood of Knowlton, there will prairie birds, like Curlews and Bartramian Sandpipers, be found nesting.

A few species, such as the Mourning Dove, Nighthawk, Arkansas Kingbird, Horned Lark, Meadowlark, Redpoll, Lark Sparrow, etc., are ubiquitous. Hence it is clear that faunal areas, in the

ordinary sense of the term, even as between prairie and pine-hills, do not admit of precise definition, although the lists made in the two regions plainly indicate a marked diversity in the species inhabiting them.

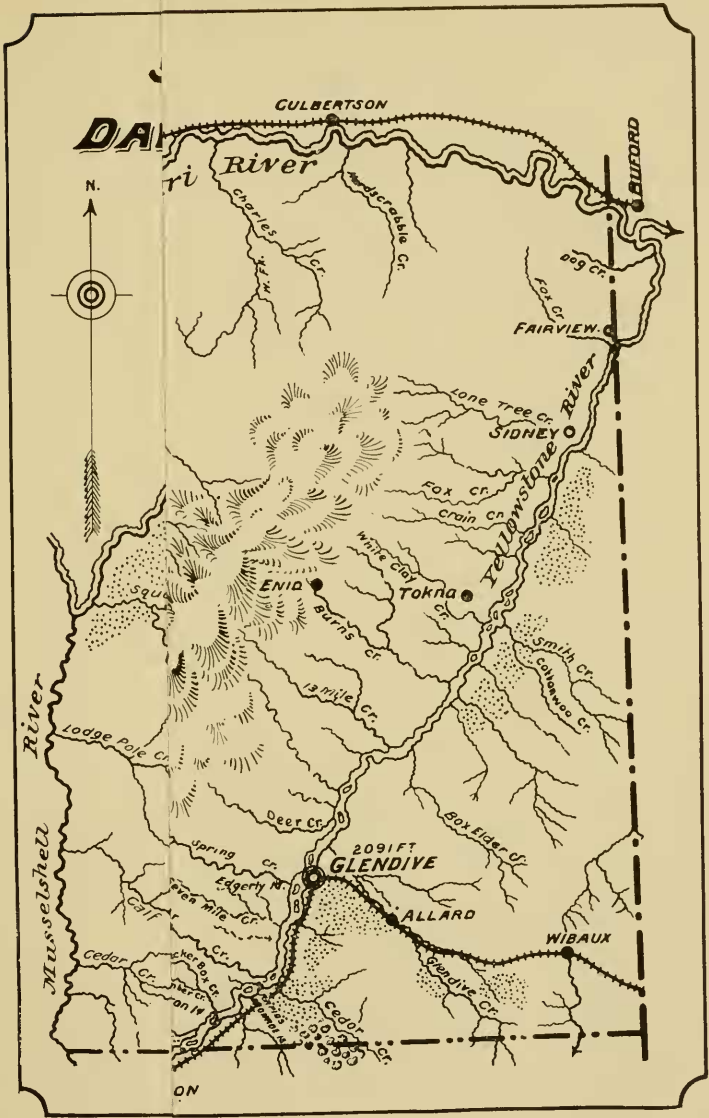
There are few indigenous birds in eastern Montana, and those of necessity are such as can support great extremes of temperature. In my own list of 190 species only 19 are permanent residents. They include the Sharp-tailed Grouse, Sage Grouse, Ferruginous Rough-leg, Golden Eagle, Prairie Falcon, Duck Hawk, Long-eared Owl, Western Horned Owl, Burrowing Owl, Hairy Woodpecker, Batchelder's Woodpecker, Desert Horned Lark, American Magpie, Piñon Jay, American Crossbill, English Sparrow, Northern Shrike, Slender-billed Nuthatch, and Long-tailed Chickadee. The remaining 171 species are either transient spring and fall migrants, summer visitors which nest here, or winter visitors which leave in the spring. Exhausted migrants are met with in most unusual situations. Mr. Lance Irvine, for example, has picked up a Coot on the open prairie, and seen a flock of Great Blue Herons resting in a like situation, while I have flushed a Sora from creeping cedar in the pine-hills. Warbling and Red-eyed Vireos have been caught on my veranda, and Pintail Ducks have alighted just outside of it. Many other instances might be cited.

Both our counties belong to the so called 'plains' region of the west where ranching, or the raising of cattle, sheep, and horses, is the only industry. Rolling prairie is therefore the predominant type of country, sage-brush the characteristic plant, and the Sage Grouse, which everywhere follows the plant, the characteristic bird. This species finds a permanent home in the wilderness of pale green bushes which, albeit they wither to yellow brown in winter, retain their foliage, and thus afford both food and shelter to the bird throughout the year. Icy winds in winter sweep over the khaki-colored expanse, the sage tops thinly veiling the deep snow beneath; and, while under such conditions Sharp-tailed Grouse burrow into the drifts, the more hardy Sage Grouse seems quite comfortable—even in a temperature of 40° below zero (Fahrenheit).

Many flowering plants adorn the prairie in summer, the most conspicuous being the triennial soapweed, whose tall stalks, cov-

ered with cream-colored bell-shaped blossoms, flourish in profusion on gravelly or sandy hills. Among less pretentious flowers are several kinds of lily, yellow daisies, blue hairbells, and quantities of purple vetch. During May, 1892, I travelled on horseback up the Tongue River from its mouth at Miles City to the Big Horn Mountains, a distance of 205 miles, returning by the same route in August, and obtaining thus abundant opportunity to observe the distinctive vegetation and bird-life of the prairie. On the return trip ranch thermometers registered the high temperature of 114° in the shade.

By far the greatest number of birds, both as regards species and individuals, are to be seen along the banks of the large rivers, but ornithological exploration in the badlands derives a peculiar charm from their extraordinary geological features and their intense solitude. Miles may be traversed with never a sign of man nor a sound more civilized than the Falcon's angry scream. The typical breeding birds of the badlands are the Golden Eagle (*Aquila chrysaetos*), Prairie Falcon (*Falco mexicanus*), Duck Hawk (*Falco peregrinus anatum*), Say's Phoebe (*Sayornis saya*), American Magpie (*Pica pica hudsonica*), Cliff Swallow (*Petrochelidon lunifrons*), and Rock Wren (*Salpinctes obsoletus*). As previously stated, the most important tract of badlands is that known as the Missouri Brakes in Dawson County which borders the Missouri River between the mouths of the Big Dry and Mussellshell, extends to 65 miles long by 10 wide, or thereabouts, and is almost entirely composed of gumbo clay. Notwithstanding its generally arid character, large groves of fir, lodge-pole pine, and red cedar, are to be found under the main divide, which I have twice visited during extended hunting trips in the locality. The first time was during March and April, 1890, when it constituted a regular sportsman's paradise, being full of mule deer, mountain sheep, and grizzly bears. On account of the time of year, however, only the latter were hunted. On April 7 the migration of wild-fowl was at its height, and I have never since seen the Anatidæ so numerous as when camped near the Big Dry River at that date. A second expedition was made early in October, 1895, in company with Mr. J. H. Price, and on this occasion a list was made of the birds observed in the Missouri Brakes at that time. The characteristic



SKETCH MAP OF DAWSON COUNTY, MONT.

Scale, 12 Miles = 1 Inch.

LEGEND

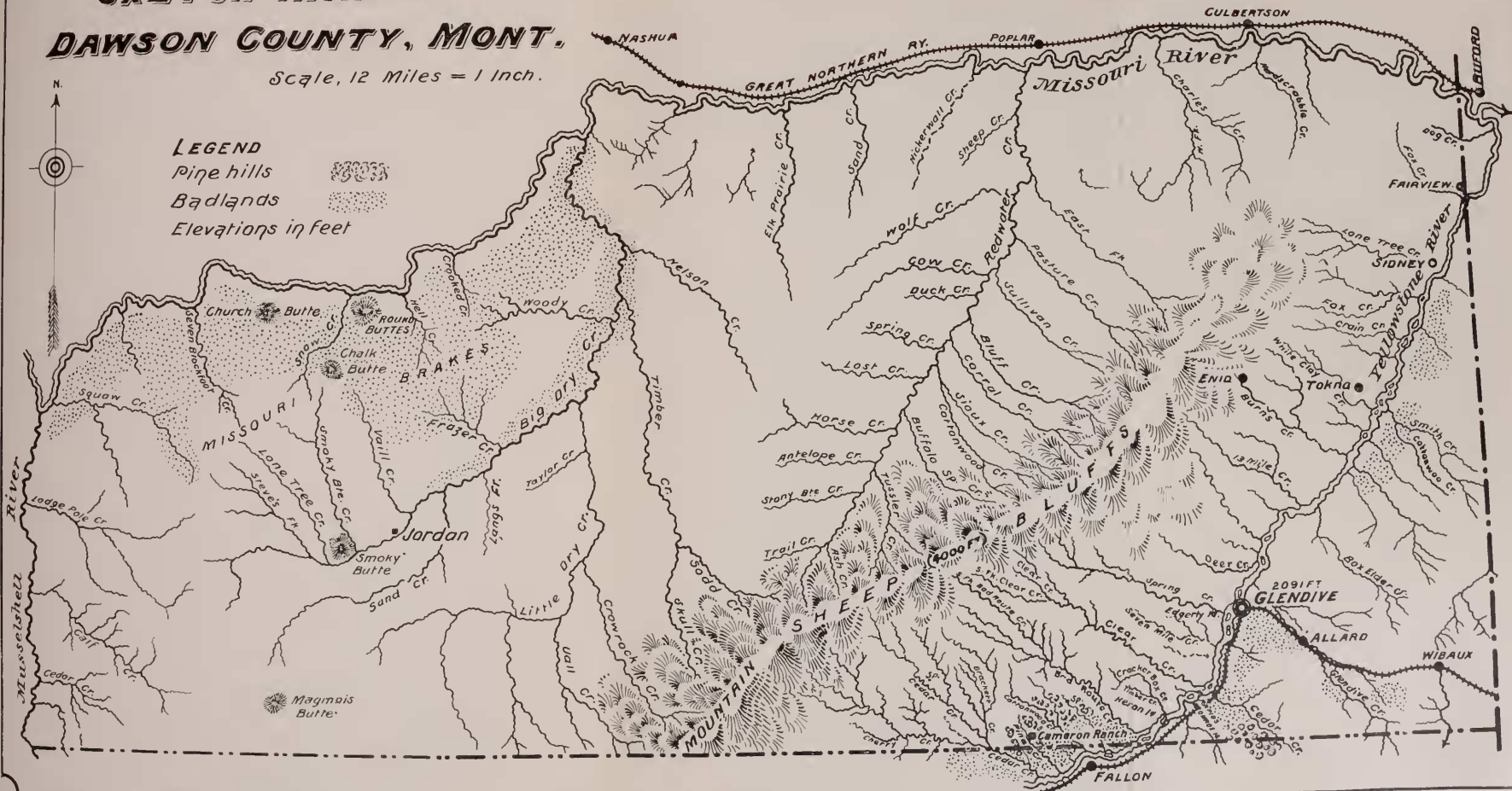
Pipe hills



Badlands



Elevations in feet



LEGEND

Pine hills



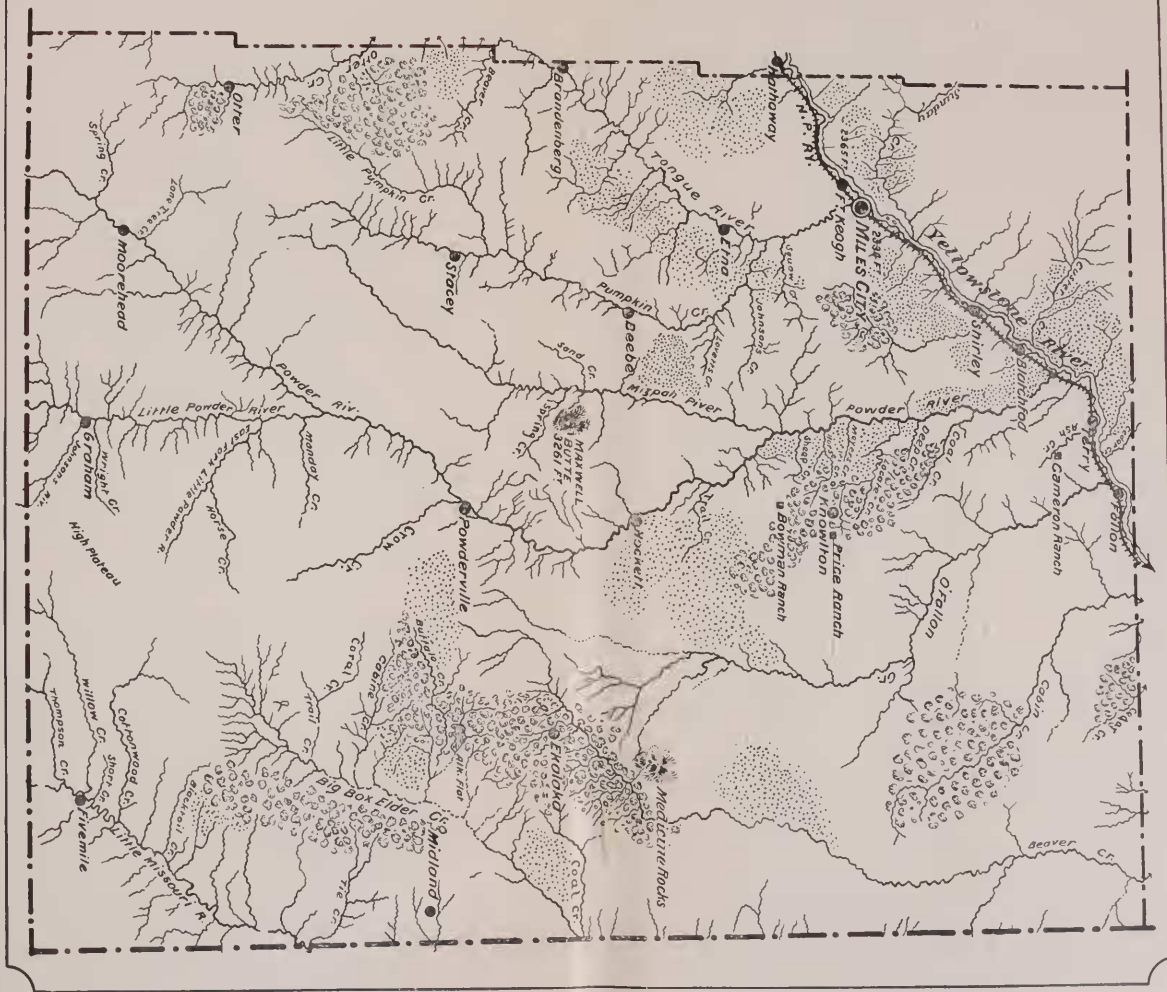
Badlands



Elevations in feet

SKETCH MAP OF CUSTER COUNTY, MONT.

Scale, 12 Miles = 1 Inch.



species were found to be the Slender-billed Nuthatch (*Sitta carolinensis aculeata*), Chickadee (*Parus atricapillus occidentalis*), and Townsend's Solitaire (*Myadestes townsendii*).

Another very wild range of badlands, commencing opposite Terry, extends along the north side of the Yellowstone River to a point about four miles west of the mouth of Custer Creek. I have explored these badlands many times, and have noted among other remarkable features a silicified tree bridging a ravine. Other smaller tracts of badlands occur on the Powder River and elsewhere.

In the badlands of the Yellowstone, despite their reputed aridness, there are surprising bursts of sporadic vegetation. Over the sombre clay walls and terraces the flowery month of June splashes a bright blaze of brilliant colors, as on a painter's palette — here a rich gamboge of yellow daisies, there the deep mauve of hyacinthine blooms, elsewhere the delicate carmine of clustering vetches, and the chaste white of Mariposa lilies. Yellow pines are most numerous and reach their greatest development around Ekalaka and Knowlton (Custer County). A pine covered area thirty miles long, extends from five miles east of Medicine Rocks to a point fifteen miles south of Ekalaka. About five miles south and east of the latter it becomes a regular forest; some of the trees are three feet in diameter, and attain a height of sixty feet before they are branched.

The widest belt of pines and cedars combined is formed by the impenetrable thickets on Cedar Creek (Custer County), which runs into the Yellowstone at Monroe Island Rapids. In places this belt is over two miles across. I built a rough shack and stable within these woods, where, in the early nineties, I was accustomed to go every winter for a few weeks to hunt deer. The thickets were simply alive with Bohemian Waxwings, which subsisted on cedar berries, and gyrated in thousands when disturbed from the high pines beneath which the red stained snow gave evidence of their familiar roosting places. In summer, among the characteristic birds which nest in the pine-hills, are Piñon Jays, Chipping Sparrows, Lazuli Buntings, Chickadees, and Mountain Bluebirds. My ranch in Custer County, five miles south of Terry, was a great haunt of Sharp-tailed Grouse and many other birds,

acres and acres of rose brush clothing the creek bottom while large patches of wild fruit trees were abundant on the hillsides. Under the taller ash and box elders spread a net-work of clematis, which intertwining with plum-trees and choke-cherries, overhung the smaller bushes, the whole forming an impenetrable covert, containing several springs of water while yielding its store of food to the birds. At one place so dense was the thicket, where it joined the north window of the ranch-house, that entry thereto was impossible save by using a fallen tree as a bridge.

Numbers of newly arrived migrants would work through this labyrinth from the north end until their further progress was barred by the window above mentioned. In this way many rare visitors were first observed from inside the room, such as Townsend's Warbler, White-crowned Sparrow, Olive-backed Thrush, etc.

My wife used to thread blue-bottle flies and hang them outside the glass, for the pleasure of watching the Long-tailed Chats and Redstarts, which would suddenly appear and pull them off the string. Many birds nested within these thickets; some of which, to the best of my knowledge, did not do so elsewhere in the county, such as the Black-billed Cuckoo and Cedar Waxwing.

In 1902, I built a ranch in Dawson County amidst pines four and a half miles to the north of Fallon, on the Northern Pacific Railway, and moved over there. The house is situated below some springs surrounded by pines and cedars where I have placed three water-troughs. All species of birds inhabiting the pine hills of eastern Montana visit them to bathe and drink. It is indeed a charming sight in summer to watch the flocks of Crossbills, Piñon Jays, and Goldfinches descend to the water, while in winter such numbers of Rosy Finches come, that the sound of their wings resembles the wind in the pines. Even mule deer from adjacent badlands drink regularly here, passing in early dawn within thirty-five yards of the house. This shows what may be accomplished where the peace of nature is never disturbed.

LIST OF SPECIES.

1. *Colymbus nigricollis californicus*. AMERICAN EARED GREBE.— Not common. A young male was shot by the ferryman at Terry on October 2, 1904, when I kept the skin. Mr. J. H. Price obtained an immature example in summer plumage on Locate Creek and made a skin. I saw two adults floating down the Yellowstone on May 7, 1905.

2. *Podilymbus podiceps*. PIED-BILLED GREBE.— Not common. Sixteen seen May 23, 1904, and eight May 31, 1904. Their manner of diving backwards with head up stream was very noticeable.

3. *Larus argentatus*. AMERICAN HERRING GULL.— Tolerably common, flying up or down the Yellowstone in the fall.

4. *Larus delawarensis*. RING-BILLED GULL.— Tolerably common. Occurs in spring and fall on the Yellowstone. An adult specimen was shot by the ferryman at Terry, May 31, 1906.

5. *Larus philadelphia*. BONAPARTE'S GULL.— Rare. A Bonaparte's Gull in first plumage was shot by Mr. Charles Mackay on August 12, 1904. It was flying over a small lake at his ranch twenty-two miles from Terry. An adult observed by me flying down the Yellowstone on July 31, 1905.

6. *Xema sabinii*. SABINE'S GULL.— Rare. An immature example of this gull was shot on the Yellowstone by the ferryman at Terry, September 23, 1904. He said he had seen about twenty-five others of this species on the previous day.¹

7. *Hydrochelidon nigra surinamensis*. BLACK TERN.— Erratic migrant in both counties. Ten seen June 8, 1895; three August 6, 1898; two July 2, 1905; one May 26, 1906; and two May 30, 1906. Mr. J. H. Price has also observed it in his vicinity (Knowlton). Extraordinarily tame when hovering over prairie ponds.

8. *Phalacrocorax dilophus*. DOUBLE-CRESTED CORMORANT.— Rare. A single bird was seen by my wife sitting behind a rock, at the edge of the Yellowstone, on October 16, 1904. When she was quite close it flapped into the water.

9. *Pelecanus erythrorhynchos*. AMERICAN WHITE PELICAN.— Rare. Mr. Dan Bowman is positive that a pair of pelicans nested on a small wooded island in the Powder River near the mouth of Locate Creek during the summer of 1884. He constantly saw both birds flying there, when camped on the river during the months of June and July, and later one only (as he supposed the male), fishing along the river bank. Unfortunately he did not investigate. Peter Lorenson shot two specimens near Miles City on September 5, 1898. Mr. A. S. Wiley shot a pelican on the Yellowstone in 1903.

10. *Merganser americanus*. AMERICAN MERGANSER.— Rare. On No-

¹ See Auk, Vol. XXII, p. 76, 1905.

vember 12, 1904, a pair of adult males flew low over the ferry boat, at Terry, and alighted on the Yellowstone when I was crossing it.

11. **Merganser serrator.** RED-BREASTED MERGANSER.—Rare. On April 7, 1890, several were seen on a muddy reed-grown lake, in a mixed multitude of other wild-fowl, near the Crow Rock, Dawson County. On February 25, 1902, I saw five mergansers flying which I took to be of this species.

12. **Lophodytes cucullatus.** HOODED MERGANSER.—Rare. A female or immature male of this species frequented a pool on my ranch, near Terry, for several days at the end of June, 1898. When I approached close it showed anxiety by elevating the crest and wings but did not fly away. I observed another on the Yellowstone May 7, 1905. Captain Thorne saw about twenty Hooded Mergansers daily from June 14 to July 17, 1889.

13. **Anas boschas.** MALLARD.—Common on migration. A good many pairs used to breed in Custer County in the early nineties but I have not heard of a nest for many years. Mallards still nest in Dawson County, on Cow Creek, a west fork of the Redwater River.

14. **Chaulelasmus streperus.** GADWALL.—Not uncommon on the Yellowstone. Transient. Numerous on April 7, 1890, near the Big Dry, Dawson County, when I shot two adult males. Mr. J. H. Price has also shot these ducks.

15. **Mareca americana.** BALDPATE.—Not uncommon on the Yellowstone. Transient. I have shot widgeon in both Custer and Dawson Counties. Mr. J. H. Price has also obtained them at Locate Creek, Custer County.

16. **Nettion carolinensis.** GREEN-WINGED TEAL.—Abundant on migration. The bags of wild fowlers made here consist chiefly of this duck and the next. For two days in September, 1892, I observed both species of Teal flying down Tongue River in very large flocks. At that time the Hon. O. H. Wallop, who was with me, killed forty-eight in about two hours' shooting each afternoon as the birds flew past. On Sept. 22, 1906, Mr. H. B. Wiley and Mr. C. F. Hedges (of Miles City) killed 80 teal of both kinds, in about equal numbers, between daylight and 8 A. M. on the Yellowstone. Three years previously Mr. H. B. Wiley and Mr. Al. Jordan shot 61 ducks between daylight and 12 o'clock, noon, on the Yellowstone, which were almost all teal. Mr. J. H. Price has also shot numbers of both kinds on Locate Creek, Custer County. Mr. Dan Bowman has seen the nests and young of this species on Fallon and Beaver Creeks, Custer County, and Mrs. W. S. Haley has seen the young on Taylor Creek, Dawson County. Green-winged Teal breed regularly on Cow Creek in Dawson County.

17. **Querquedula discors.** BLUE-WINGED TEAL.—Common everywhere during migration. While it is certain that these ducks breed on islands of the Yellowstone, as pairs may be seen throughout the summer, I have never actually discovered a nest. On September 27, 1904, a Blue-winged



BADLANDS ON THE YELLOWSTONE RIVER, MONTANA.



PINE HILLS AND BADLANDS ON YELLOWSTONE RIVER AT JUNCTION OF COTTONWOOD CREEK,
DAWSON COUNTY, MONTANA.

Teal was killed by striking against the wire cable of the ferry boat at Terry. On May 18, 1905, in a ride down the Yellowstone from west side of Fallon to Conlin (7 miles) four hundred and fifty ducks were examined and counted through binoculars. Of these twelve were Gadwall, six Widgeon, six Mallard, the remaining four hundred and twenty-six being composed of Shovellers and Blue-winged Teal.

18. *Spatula clypeata*. SHOVELLER.—Common, arriving about end of March or beginning of April, associating with other ducks, chiefly Pintail, Green-winged and Blue-winged Teal. Many remain all the summer and frequent the unsheltered prairie ponds. I have seen them as late as the middle of July in these exposed situations, when they are tame and unsuspecting, but I have not found a nest. When a party of Shovellers are feeding on a prairie lake the adult drakes have a curious habit of constantly raising themselves in the water by balancing on their tails.

19. *Dafila acuta*. PINTAIL.—Common but transient. According to my records, kept since 1889, one of the commonest ducks on the spring migration. Pintail never remain long, even when unmolested, and on this account are seldom shot. While reported from most parts of both counties they prefer alighting near the large streams, and Mr. J. H. Price has never seen them in his locality (Knowlton). Terry flat is a favorite resting place. On my return trip from the Missouri Brakes, in April, 1890, when hosts of wild-fowl were seen, the Pintail outnumbered the others and were numerous on the Powder River where I lived.

I have several times seen a flock of these graceful ducks arrive at close quarters. Although much larger than Green-winged Teal, their light and graceful evolution resemble the latter, when, attracted by water, they swoop down to it as if to settle, but again shoot upwards. If satisfied that there is no danger they straggle into the pool, uttering a very soft low quacking, and immediately on arrival begin washing, playing, feeding, and walking about.

Mr. J. Alex. Fraser (of Glendive) informs me that he saw about a thousand migratory Pintails, in different bunches, on one day of September, 1906, at Al. Stillson's ranch on Cow Creek, Dawson County, where some of these ducks breed and are protected by the proprietor.

20. *Aythya americana*. REDHEAD.—Not common. Occasionally observed on Yellowstone; thirty seen September 26, 1903. Mr. J. H. Price has twice seen Redheads on the smaller creeks. Mr. Dan Bowman has seen them "once or twice."

21. *Aythya affinis*. LESSER SCAUP DUCK.—Tolerably common. Scaup are fond of frequenting the reservoirs of J. B. Kempton, near Terry, four miles from Yellowstone. Twenty-three seen on Yellowstone May 7, 1905.

22. *Clangula clangula americana*. AMERICAN GOLDEN-EYE.—Not common. Occasionally seen on Yellowstone. Twelve haunted the vicinity of the Fallon ferry for some weeks during October, 1903. Thirty observed flying up Yellowstone September 26, 1904, and ten seen flying down October 19, 1906.

23. *Charitonetta albeola*. BUFFLE-HEAD.— Captain Thorne records this duck as rare. I have not noticed it. Mr. H. B. Wiley (of Miles City), who has had considerable experience of duck shooting on the Yellowstone informs me (*in lit.*) that he has never seen it.

24. *Somateria dresseri*. AMERICAN EIDER.— Mr. Charles Freer of Glendive assured me that an Eider Duck was shot there in 189? and identified by a Norwegian.

25. *Erismatura rubida*. RUDDY DUCK.— Captain Thorne mentions a flock of about forty observed April 21, 1889. I have not seen it but Mr. H. B. Wiley has shot a few of this species on the Yellowstone.

26. *Chen hyperborea*. LESSER SNOW GOOSE.— Rare. Transient. April 7, 1890, on Big Dry River, Dawson County, several seen. In spring of 1892 on Powder River, three seen. One of these was wounded by Mr. E. Coggs hall with a rifle and lingered on the river but was not secured. November 12, 1903, eight seen flying south. September 12, 1904, eight flew within gunshot of the ferryman's house at Terry.

27. *Chen rossii*. ROSS'S SNOW GOOSE.— Captain Thorne killed a goose of this species on April 25, 1892.

28. *Branta canadensis*. CANADA GOOSE.— Common on migration. Very few geese breed here now, compared to the numbers that did so formerly, in the tops of broken tree-trunks, in hollows of partly decayed trees on ledges of precipitous cliffs, and the islands of rivers. In 1892, about one hundred goslings were hatched on the Lower Powder River alone. Here, in 1890, I was shown two goose nests in the high branches of cottonwoods, and, during June, 1893, a goose sat in a like situation at Jack Selby's lambing camp on Powder River.

Although in my experience and that of Mr. Dan Bowman, geese generally repaired the deserted nests of Swainson's Hawk, I know of two authentic instances when they were observed to build the entire nest for themselves amidst the branches.

When nesting in trees the goose carries her young on her back, like the Eider Duck from the rocks in the Orkney Isles.¹ In the late nineties a goose nested every year in a hollow cottonwood by the Yellowstone on what is now my land. The nest was about six feet from the ground and composed almost entirely of down and feathers from the goose's own body.

Mrs. A. Smith of Fallon hatched eight eggs from this nest under a hen and kept the goslings for two years. She informed me that if two clutches of eggs were removed the goose would, nevertheless, lay a third set. For four years (1903-06) a pair of geese reared a brood near this place and the young were seen by me and other observers. Although the nest was undoubtedly on the ledge of a vertical cut bank above the Yellowstone it was not discovered until June 1, 1906. At this time the goose, after laying eight eggs, had deserted it, on account of a landslide which had

¹ See 'A Fauna of the Orkney Islands' by Harvie-Brown and Buckley, who published my notes on this subject.

partially covered up the nest. The average date for the spring arrival of the Canada Goose at Terry is March 27.

29. *Branta canadensis hutchinsii*. HUTCHINS'S GOOSE.—Rare. On October 4, 1903, twenty of these small geese flew low over me as I waited on the north bank of the Yellowstone for my wife who was being conveyed across by the ferryman. All obtained a good view.

30. *Olor buccinator*. TRUMPETER SWAN.—Rare. About May 1, 1884, Mr. Dan Bowman saw ten or twelve swans resting on the Powder River just after sunrise. On October 27, 1905, an adult male Trumpeter Swan was shot by a boy on the Yellowstone at Tusler, near Miles City.

31. *Botaurus lentiginosus*. AMERICAN BITTERN.—Not common. Occurs regularly on migration.

32. *Ardea herodias*. GREAT BLUE HERON.—Common in both counties.¹ (Plate VIII, Fig. 1.)

33. *Grus canadensis*. LITTLE BROWN CRANE.—An irregular fall migrant occurring in flocks of from ten to one hundred and fifty. This is the common Sandhill Crane of this region, *Grus mexicana* being much rarer. On September 24, 1894, a large flock hovered for some time above my ranch house in Custer County, with the intention of alighting, when I could not afford time to watch them. In September, 1898, a regular invasion of southward bound flocks took place at Terry. The inhabitants pursued them with every description of weapon but only one was shot — by J. C. Braley, with a rifle at three hundred yards. When fired at with a rifle the birds would fly only about half a mile and again alight, so that the fusillade could be continued at intervals. The only possible way of obtaining specimens is from concealment in the corn fields which they frequent. The cranes always flew low, generally within shot from the ground of a heavy shoulder gun, and in a straggling manner, although during migration they rise to a great height. They continued to arrive in the neighborhood of Terry for three weeks (until October 10) when all had left excepting a small flock. If undisturbed the cranes fed in the morning and evening, strongly recalling turkeys in general behavior; their stately manner of walking and drooping tertiary plumes causing them to present a striking appearance.

34. *Grus mexicana*. SANDHILL CRANE.—Rare. May, 1892, one caught with a fish hook, baited with a frog, by Oliver Van on Fallon Creek, as he informed me. At that time Sandhill Cranes were reported numerous in that locality. September 22, 1893, flocks were seen on Powder River, which ran dry and the birds were attracted by the stranded fish. Mr. Dan Bowman, who was familiar with these birds in Missouri and Nebraska, has only seen them twice in Montana.

35. *Rallus virginianus*. VIRGINIA RAIL.—Captain Thorne records a male killed August 10, 1888.

¹ See Cameron, Nesting of Great Blue Heron in Montana. Auk, Vol. XXIII, 252.

36. *Porzana carolina*. SORA.— Tolerably common. One killed against telegraph wire (Terry), September 12, 1901. Another impaled on barbed wire fence (Terry), September 7, 1903. My grayhounds have flushed it from sage-brush, and I have seen it so tame on the spring migration that at first it might have been caught by the hand. There is a small colony nesting in a marsh about two miles east of Terry. I rode there on June 18, 1898, and found the nests which were almost in the water of a grass grown pool, difficult to approach. Two contained thirteen and five eggs respectively. Their owners when disturbed creep about in the adjoining long grass and rose brush.

37. *Fulica americana*. AMERICAN COOT.— Tolerably common. Breeds. In October, 1904, a coot in an exhausted condition was picked up on the prairie by Mr. Lance Irvine, which he conveyed to the ranch kitchen where it soon recovered and was liberated.

38. *Phalaropus lobatus*. NORTHERN PHALAROPE.— Occasional migrant, usually in small numbers. On May 21, 1899, an extraordinary invasion of phalaropes occurred at my ranch in Custer County, six miles south of Terry, when examples of both these species and the next continued to arrive in greater or less numbers until the end of the month. At first the Red-necks predominated, and Mr. H. Tusler, whose ranch adjoins mine on the south, and who was the first to observe their advent, brought me three specimens of *Phalaropus lobatus* on the date above mentioned, shot, as he informed me, out of at least three hundred birds, which included (as I subsequently learned) a few of *Steganopus tricolor*. All the birds were swimming about in shallow lakes, formed by the recent rains, on the prairie. The relative numbers of the two species were subsequently reversed, for, the main flight of Red-necks having passed, only a few were afterwards seen sprinkled among the Wilson's Phalaropes, which continued to arrive daily in considerable flocks. Both species frequented the temporary ponds formed by the abundant rains in the depressions of grass-lands, but seemed to shun the regular creeks and water-holes altogether. At the moment of alighting they were so thickly disposed that a large number might have been killed by one shot, but immediately after reaching the surface of the water they scattered in all directions over the pond. The Wilson's Phalaropes, both when feeding and when disturbed and circling on the wing, constantly uttered a low croaking, which at close quarters might be compared to the much louder note of the Sandhill Cranes, or, at a distance, to the faintly heard barking of a dog. On the other hand, I have heard them give a shrill and totally different call of indecision or satisfaction on their first arrival, when hovering above a pool. Both species gave the impression of extraordinary activity as they fed greedily on a species of gnat which swarmed close to the surface of the water. To catch these gnats they swam about with incredible swiftness moving their necks from side to side, or backwards and forward, incessantly. In every flock of Wilson's Phalaropes the females greatly outnumbered the males.

The stomachs of the phalaropes examined contained minute stones, grass, and the black gnats above alluded to, mashed to a pulp. The eggs in the ovaries of the females were extremely small, not much larger than pin-heads; in only one was there an egg the size of a pea. (Condensed from 'The Ibis' for January, 1900, page 67.)

39. *Steganopus tricolor*. WILSON'S PHALAROPE.— Occasional migrant. See above.

40. *Recurvirostra americana*. AMERICAN AVOCET.— Uncommon spring migrant. In the spring of 189? two specimens were obtained on Powder River at the ranch of Mr. William Ferdon and are now in his possession.

On or about May 1, 1904, eleven avocets alighted in the mud of the north shore of the Yellowstone between Terry and Fallon. Mrs. W. S. Haley, wife of a ranchman living on the river bank, shot an adult female which she gave me.

On May 7, 1905, I watched, through binoculars, a flock of twenty-two avocets on the Yellowstone near Terry for a considerable time. The avocets appeared anxious to leave but were afraid to do so as a pair of Peregrines wheeled overhead. The former flew in low circles over the river, and, uttering shrill cries, alighted in deep water swimming until they could wade. Many were in immature plumage while others had a complete cinnamon neck and head. On May 16, 1906, I saw an avocet in splendid plumage at Mr. W. S. Haley's dam.

41. *Gallinago delicata*. WILSON'S SNIPE.— Tolerably common. Mr. J. H. Price informs me that it breeds, and he has seen the downy nestlings at his ranch on Locate Creek. A few birds remain during the winter.

42. *Actodromas maculata*. PECTORAL SANDPIPER.— Rare. Mr. J. H. Price gave me one of a pair of Pectoral Sandpipers which he shot while duck-shooting in a snow-storm on October 18, 1905. Although an ardent wild-fowler, whose Montana experience dates back to the eighties, Mr. Price had never before met with this species but identified it by means of Chapman's 'Color Key.' Three days later, on October 21, I saw a Pectoral Sandpiper at the edge of J. B. Kempton's reservoir near Terry.

43. *Actodromas bairdii*. BAIRD'S SANDPIPER.— Captain Thorne mentions this bird as rare. I have not seen it.

44. *Actodromas minutilla*. LEAST SANDPIPER.— Irregular migrant. Numerous at the time of the invasion of Phalaropes, beginning May 21, 1899, and consorting with them.

45. *Ereunetes pusillus*. SEMIPALMATED SANDPIPER.— Captain Thorne records this sandpiper as "Common in spring." I have not come across it.

46. *Limosa hæmastica*. HUDSONIAN GODWIT.— Rare. A female Hudsonian Godwit in transition plumage was shot by George Tusler at his brother's ranch near Terry, on May 10, 1899, and brought to me for identification. This was in the spring of the memorable flight of waders described in 'The Ibis' for January, 1900. The skin was sent to Professor

M. J. Elrod of the University of Montana. I saw a godwit on April 7, 1890, near the Crow Rock, Dawson County, but could not ascertain the species.

47. *Totanus melanoleucus*. GREATER YELLOW-LEGS.—Not common like the next. I saw numbers on Tongue River in the fall of 1892. One shot on Powder River in the fall of 1889.

48. *Totanus flavipes*. YELLOW-LEGS.—Common in fall.

49. *Helodromas solitarius*. SOLITARY SANDPIPER.—Common in fall.

50. *Symphemia semipalmata inornata*. WESTERN WILLET.—Irregular migrant. May 25, 1902, a flock of eleven willets alighted near the Terry ferry boat and George Tusler (deputy sheriff) killed an adult male with his revolver. The remaining ten uttered loud shrill cries but did not go far away. May 27, 1903, six willets were seen at the edge of the Yellowstone. September 5, 1903, when my wife and I were in a buggy, seven willets flew up the road towards us and alighted at a waterhole half a mile from Terry. September 8, 1903, we saw nine willets standing in the Yellowstone. Mr. J. H. Price has never met with this bird and Captain Thorne reports it as "rather rare in spring. About twelve seen in all."

51. *Bartramia longicauda*. BARTRAMIAN SANDPIPER.—Common, arriving the middle of May. These sandpipers are nowhere so abundant in Custer County as on the big prairie flat, some twenty-five miles across, which extends from about four miles south of Terry to the pine hills. Numbers breed here, and two or three pairs bred annually upon my ranch in Custer County or that of Mr. H. Tusler adjoining, which mark the northern boundary of this plain. The birds made no nest but laid four eggs in the center of a tussock of grass, which are invisible from outside, and above the level of the ground upon the pressed down herbage. In one instance the sitting bird was so tame that she remained only two feet from her eggs when flushed and would peck at an extended forefinger. Nestlings are seen early in July.

The Bartramian Sandpiper appears less numerous in Dawson County.

52. *Actitis macularia*. SPOTTED SANDPIPER.—Common. Breeds along the Yellowstone, as I have seen the young birds but never happened actually to discover a nest. On May 18, 1905, counted twenty Spotted Sandpipers along the Yellowstone shore.

53. *Numenius longirostris*. LONG-BILLED CURLEW.—A very common summer visitor, arriving about the middle of April. Curlews nest all over the prairie and in the fenced pastures of ranches, the young being all hatched out before the middle of June. Eggs have been found as early as the first week in May. Curlews lay four eggs on the dry open uplands, in a hollow of the plain lined with dried grass; they are difficult to find unless a flock of sheep or bunch of horses are driven over the ground which force the sitting birds from their nests. The incubating curlews will allow horses to all but tread upon them, and they look so like "buffalo chips" as to be easily mistaken for them at a little distance. If the female

runs along the ground with humped back and slightly elevated wings she has eggs close by; if, on the other hand, she flies towards and around the intruder screaming vociferously, the young are hatched out and concealed in the vicinity. On their first arrival and during the nesting season, when they are usually met with in pairs, curlews are exceedingly fearless but as soon as the young can fly (at the end of July), they collect into large flocks, prior to migrating, which may contain a hundred birds in each. They are then shy and difficult of approach but as far as I am aware nobody ever tries to shoot them here. (Plate VIII, Fig. 2.)

Curlews feed chiefly on grasshoppers, but there is an abundance of beetles and grubs for them before the first named mature, about the middle of June. I have seen the nesting curlews make flying attacks at Swainson's Hawk and the Marsh Hawk with their long bills, just as they drive away Richardson's Skua in the Orkney Islands.¹

54. *Charadrius dominicus*. AMERICAN GOLDEN PLOVER.—Occasional fall migrant. On September 9, 1896, I saw a flock of thirty or more Golden Plover on a bare flat near my ranch in Custer County. I remained motionless and they wheeled around my horse within easy shot. On the 16th of the same month, at the same place, I observed a small flock of fifteen birds which crouched to the ground as I rode up to them. They seemed very tame and only flew a few yards. On September 23, I again saw eight birds in the same locality. Their call is similar to that of the European form.

55. *Oxyechus vociferus*. KILLDEER.—Abundant. One of the earliest summer visitors, arriving at the end of March. Killdeer are very tame and confiding and will rear young close to ranch buildings, although a stony slope near water is a favorite nesting site.

56. *Podasocys montana*. MOUNTAIN PLOVER.—A regular summer visitor, but scarce. Two or three pairs breed annually on the prairie dog towns in the vicinity of Terry. Their eggs are very hard to find, but I have seen an egg as early as May 23. The birds spend most of their time on the ground, where they run with incredible swiftness, fully twice as fast as a Killdeer, which alone would always attract attention to them. If forced to rise these plover fly very low, and run for some distance upon alighting, when they will allow themselves to be pressed closely before taking wing again. When disturbed they have a curious habit of collapsing, or shrinking into themselves, and stretching their bodies to the full height alternately. On June 15, 1898, I was out with three grayhounds looking for a coyote when I saw a pair of these plovers in the center of a prairie dog town. I at once began to look systematically for a nest, walking in circles, starting from my horse, which stood wherever he was left, the three dogs lying beside him. Having searched in this manner for nearly three hours without result, or even seeing either plover again, I was beginning to lose heart when a single plover again appeared showing

¹ See Harvie-Brown and Buckley, *A Fauna of the Orkney Islands*, p. 225.

extreme agitation at my approach. Running with a trailing wing she would fall over and lie struggling on the ground, which induced the dogs to chase her away, and convinced me that she had young close by. I again made the dogs lie down by the horse and began to search in small, gradually increasing circles, but not without opposition on the part of the distracted parent which sought by feints and struggles to engage my attention. All the time she kept up a short, shrill whistle, dropping at intervals to a harsh note, and appearing to utter these sounds without opening her beak.

Finding her efforts unavailing she would run close up to me, and flinging herself down, remain motionless with outspread wings, in the hope that I would desist from my search to pick her up. By her manœuvres she assisted me to find her nestlings and I soon saw two little pale yellow birds, spotted with black, together with an egg, on the bare ground, for there was no pretence at a nest. The two nestlings were perfectly helpless and unable to stand, which seems to indicate that some days must elapse before the young of this species can run.

57. *Pediœcetes phasianellus campestris*. PRAIRIE SHARP-TAILED GROUSE.—Common. (Plate IX, Fig. 2.)

In the pairing season the Sharp-tailed Grouse indulge in an extraordinary 'play' which is called a 'chicken dance' and roughly may be said to take place every day, excepting during stormy or threatening weather, from about April 10 to May 10. In the spring of 1900 I had unusual opportunities for watching it, the grouse having chosen for their playground the further bank of the creek intersecting my ranch, which here sloped from a high steep cliff on the south to a level sage brush flat on the north. As the channel of the creek was deep it was possible by using great care to approach close to them without being observed, and on two occasions I got within twenty yards, being at one time only about six yards from some of the birds. Not until April 18 did I actually observe the grouse, although their dance was begun at least a week earlier, as could be told by their cooing, which was audible about a mile on a still day. There was an open space in the sage brush which was thick on the down creek or north side, and to this point they flew by twos and threes until twenty had assembled on the playground, not to mention the hidden spectators. The average time for the beginning of the dance was about 4.30 P. M., which continued until six or much later if there were many interruptions. What little I had previously seen and read had led me to suppose that the play of this grouse would be an excitable, confused performance very different from the regular evolutions actually witnessed, and which I have endeavored to set down here as accurately as possible. At this date (April 18) the ball is opened by a single cock making a run across the open space as fast as he can use his legs, the tail being inclined stiffly over the back, while the wings are dragged, so that a large white area is exposed behind. The vivid yellow supraciliary fringe is erected, and, all



FIG. 1. GREAT BLUE HERON.
Nine weeks old.



FIG. 2. NEST OF LONG-BILLED CURLEW.

